

CLAIM AMENDMENTS

Please cancel claims 6, 17-18 and 24 without prejudice or disclaimer. Please add new claims 33-52 as set forth below.

1. (Original): Seed of corn inbred line designated LH246, representative seed of said line having been deposited under ATCC Accession No. _____.
2. (Original): A corn plant, or parts thereof, produced by growing the seed of claim 1.
3. (Original): Pollen of the plant of claim 2.
4. (Original): An ovule of the plant of claim 2.
5. (Original): A corn plant, or parts thereof, having all of the physiological and morphological characteristics of the corn plant of claim 2.
6. (Canceled)
7. (Original): A tissue culture of regenerable cells from the corn plant of claim 2.
8. (Previously presented): The tissue culture according to claim 7, the cells or protoplasts of the tissue culture having been isolated from a tissue selected from the group consisting of leaves, pollen, embryos, roots, root tips, anthers, silks, flowers, kernels, ears, cobs, husks, and stalks.
9. (Previously presented): A corn plant regenerated from the tissue culture of claim 7, wherein the regenerated plant expresses all the morphological and physiological characteristics of inbred line LH246.
10. (Previously presented): A corn plant with all of the physiological and morphological characteristics of corn inbred LH246, wherein said corn plant is produced by a tissue culture process using the corn plant of claim 5 as the starting material for said process.
11. (Original): A method for producing a hybrid corn seed comprising crossing a first inbred parent corn plant with a second inbred parent corn plant and harvesting the resultant hybrid corn seed, wherein said first inbred parent corn plant or second said parent corn plant is the corn plant of claim 2.
- 12-18. (Canceled)
19. (Original): A method for producing a LH246-derived corn plant, comprising:

- a) crossing inbred corn line LH246, representative seed of said line having been deposited under ATCC accession number _____, with a second corn plant to yield progeny corn seed; and
- b) growing said progeny corn seed, under plant growth conditions, to yield said LH246-derived corn plant.

20-32. (Canceled)

Please add the following new claims:

- 33. (New) A male sterile corn plant produced by transforming the corn plant of claim 2 with a transgene that confers male sterility.
- 34. (New) A method of introducing a desired male sterility trait into corn inbred line LH246 comprising:
 - (a) crossing LH246 plants grown from LH246 seed, representative seed of which has been deposited under ATCC Accession No. _____, with plants of another corn line that comprise a desired male sterility trait to produce F1 progeny plants;
 - (b) selecting F1 progeny plants that have the desired male sterility trait to produce selected F1 progeny plants;
 - (c) crossing the selected progeny plants with the LH246 plant to produce backcross progeny plants;
 - (d) selecting for backcross progeny plants that have the desired male sterility trait and physiological and morphological characteristics of corn inbred line LH246 listed in the Variety Description Information to produce selected backcross progeny plants; and
 - (e) repeating steps (c) and (d) three or more times in succession to produce selected fourth or higher backcross progeny plants that comprise the desired male sterility trait and all of the physiological and morphological characteristics of corn inbred line LH246 listed in the Variety Description information as determined at the 5% significance level when grown in the same environmental conditions.
- 35. (New) A plant produced by the method of claim 34, wherein the plant has the desired male sterility trait and all of the physiological and morphological characteristics of corn

- inbred line LH246 listed in the Variety Description Information as determined at the 5% significance level when grown in the same environmental conditions.
36. (New) A method of producing an herbicide resistant corn plant comprising transforming the corn plant of claim 2 with a transgene that confers herbicide resistance.
 37. (New) An herbicide resistant corn plant produced by the method of claim 36.
 38. (New) The corn plant of claim 37, wherein the transgene confers resistance to an herbicide selected from the group consisting of: imidazolinone, sulfonylurea, glyphosate, glufosinate, L-phosphinothricin, triazine and benzonitrile.
 39. (New) A method of producing an insect resistant corn plant comprising transforming the corn plant of claim 2 with a transgene that confers insect resistance.
 40. (New) An insect resistant corn plant produced by the method of claim 39.
 41. (New) A method of producing a disease resistant corn plant comprising transforming the corn plant of claim 2 with a transgene that confers disease resistance.
 42. (New) A disease resistant corn plant produced by the method of claim 41.
 43. (New) A method of producing a corn plant with decreased phytate content comprising transforming the corn plant of claim 2 with a transgene encoding phytase.
 44. (New) A corn plant with decreased phytate content produced by the method of claim 43.
 45. (New) A method of producing a corn plant with modified fatty acid metabolism or modified carbohydrate metabolism comprising transforming the corn plant of claim 2 with a transgene encoding a protein selected from the group consisting of stearyl-ACP desaturase, fructosyltransferase, levansucrase, alpha-amylase, invertase and starch branching enzyme.
 46. (New) A corn plant produced by the method of claim 45.
 47. (New) The corn plant of claim 46 wherein the transgene confers a trait selected from the group consisting of waxy starch and increased amylose starch.
 48. (New) A method of introducing a desired trait into corn inbred line LH246 comprising:
 - (a) crossing LH246 plants grown from LH246 seed, representative seed of which has been deposited under ATCC Accession No. _____, with plants of another corn line that comprise a desired trait to produce F1 progeny plants, wherein the

desired trait is selected from the group consisting of male sterility, herbicide resistance, insect resistance, disease resistance and waxy starch;

- (b) selecting F1 progeny plants that have the desired trait to produce selected F1 progeny plants;
 - (c) crossing the selected progeny plants with the LH246 plants to produce backcross progeny plants;
 - (d) selecting for backcross progeny plants that have the desired trait and physiological and morphological characteristics of corn inbred line LH246 listed in the Variety Description information to produce selected backcross progeny plants; and
 - (e) repeating steps (c) and (d) three or more times in succession to produce selected fourth or higher backcross progeny plants that comprise the desired trait and all of the physiological and morphological characteristics of corn inbred line LH246 listed in the Variety Description information as determined at the 5% significance level when grown in the same environmental conditions.
49. (New) A plant produced by the method of claim 48, wherein the plant has the desired trait and all of the physiological and morphological characteristics of corn inbred line LH246 listed in the Variety Description information as determined at the 5% significance level when grown in the same environmental conditions.
50. (New) The plant of claim 49 wherein the desired trait is herbicide resistance and the resistance is conferred to an herbicide selected from the group consisting of: imidazolinone, sulfonylurea, glyphosate, glufosinate, L-phosphinothricin, triazine and benzonitrile.
51. (New) The plant of claim 49 wherein the desired trait is insect resistance and the insect resistance is conferred by a transgene encoding a *Bacillus thuringiensis* endotoxin.
52. (New) The plant of claim 49 wherein the desired trait is male sterility and the trait is conferred by a cytoplasmic nucleic acid molecule that confers male sterility.